

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 April 2005 (21.04.2005)

PCT

(10) International Publication Number
WO 2005/035777 A1

(51) International Patent Classification⁷: C12P 21/06

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(21) International Application Number:

PCT/US2004/033137

(22) International Filing Date: 7 October 2004 (07.10.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/509,457

8 October 2003 (08.10.2003) US

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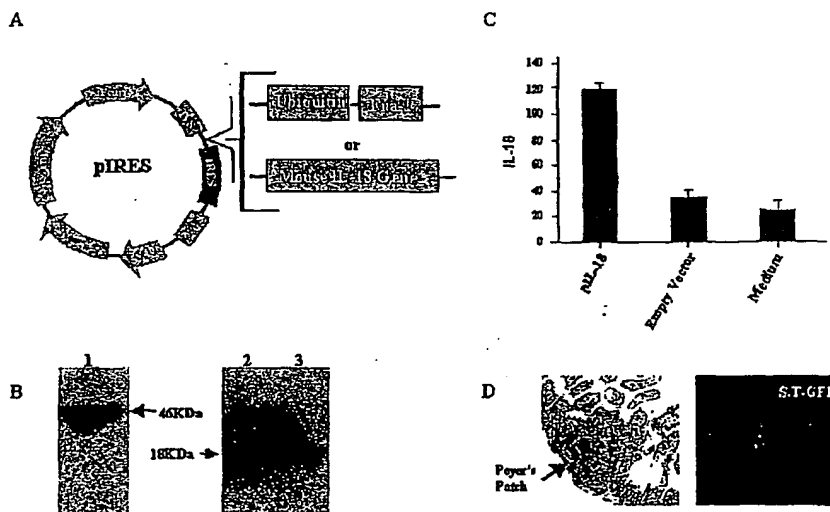
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

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(54) Title: DNA VACCINES AGAINST TUMOR GROWTH AND METHODS OF USE THEREOF



(57) Abstract: A DNA vaccine suitable for eliciting an immune response against cancer cells comprises a polynucleotide construct operably encoding an a Fra-1 protein, such as a polyubiquitinated human Fra-1 protein, and IL-18, such as human IL-18, in a pharmaceutically acceptable carrier. In a preferred embodiment, the polynucleotide construct is operably incorporated in an attenuated bacterial vector, such as an attenuated Salmonella typhimurium, particularly a doubly attenuated aroA- dam- S. typhimurium. Transformed host cells, methods of inhibiting tumor growth, of vaccinating a patient against cancer, and of delivering genetic material to a mammalian cell in vivo are also described.

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FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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